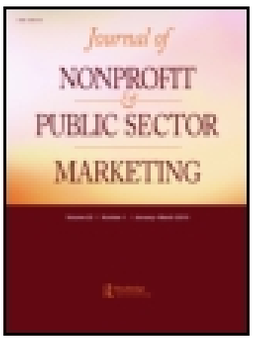

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On the Heterogeneity of Preferences for Disability Services

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ABSTRACT

This paper investigates heterogeneity of preferences for disability services within the theoretical framework of consumption values. We conducted interviews with people with a disability and disability service providers to develop survey items, then conducted a survey with 2000 adult Australian residents who either had a disability or were carers of a person with a disability. After conducting descriptive analyses and data-driven market segmentation, findings revealed that, at the aggregate level, basic or functional benefits of disability services are most important. However, when accounting for heterogeneity, very distinct benefit patterns emerge, pointing to the substantial potential for improving disability services by catering to distinct market segment needs. These insights have the potential to improve disability service provision, thus maximally harvesting the opportunities from disability service models that now often include commercial providers, and enabling people with disabilities to make optimal choices in relation to both services and providers.

KEYWORDS

Disability; theory of consumption values; consumer preferences; heterogeneity; market segmentation

Introduction

One billion people – 15% of the global population – have a disability (World Bank, 2019). Having a disability is associated with more health-related problems, lower education levels, higher unemployment and higher levels of poverty (World Bank, 2019). Suitable disability support services are critically important to ensure everyone can fully participate in society.

Disability services are commonly seen as standardized medical-related services. However in reality, the government-funded services available to assist people with disabilities can include a range of supports, for example, to assist with daily life (e.g., cleaning/linen services or house/yard maintenance); social and community participation (e.g., excursions/day trips); living arrangements (e.g., applying for rental tenancy), finding and keeping a job (e.g., employment-related assessment and counseling); improved health and wellbeing (e.g., personal training or nutrition advice), and improved learning (e.g., skills training advice, support moving from school to paid employment) (National

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Disability Insurance Agency, 2021). It can also include other supports such as those relating to transport, assistive technology or specialized consumables (e.g., supports for interpreting/translating) (National Disability Insurance Agency, 2021).

Disability services are rarely designed in view of client preferences. For commercial services, consumer preferences and heterogeneity in those preferences, routinely serve as starting point for service design. Market segmentation (Dolnicar et al., 2018) provides insights into preference heterogeneity, but – while increasingly embraced by parts of the social sector (Dolnicar & Randle, 2007; Randle et al., 2012, 2014) – remains underutilized in disability services. The aim of the present study is to demonstrate the value of market segmentation for the development of improved disability services.

Our study makes two theoretical contributions. First, it identifies systematic heterogeneity in service preferences among clients of disability services. Second, it pioneers the use of the theory of consumption values (Sheth et al., 1991) in the context of disability services. Disability services differ from other products to which this theory has been applied in two ways: (1) purchasing such services is not optional, it is a necessity; and (2) the person using the services is often not the person purchasing them (the carer). At a practical level, our study offers immediate guidance to disability service providers on how to understand which service aspects are most important to people with disabilities as a whole, and within specific market segments. This knowledge enables them to improve service provision.

Theory of consumption values

According to the theory of consumption values (Sheth et al., 1991) functional, social, emotional, epistemic and conditional value dimensions drive consumer choice. Functional value is the "capacity for functional, utilitarian or physical performance"(Sheth et al., 1991, p. 160) – the product does what it is supposed to do. Social value provides an "association with one or more specific social groups" (Sheth et al., 1991, p. 161), and often derives a link with groups in society that are viewed positively. Emotional value is a product's ability to "arouse feelings or affective states" (Sheth et al., 1991, p. 161) – it makes consumers feel good. Epistemic value is a product's ability to "arouse curiosity, provide novelty, and/or satisfy a desire for knowledge" (Sheth et al., 1991, p. 162). Conditional value is the utility gained because of the "specific situation or set of circumstances" (Sheth et al., 1991, p. 162). For example, utility is higher at certain times of the year (e.g., sunscreen in summer) or at particular life stages (e.g., baby furniture when pregnant).

The theory of consumption values has been extensively validated across different domains (Sweeney & Soutar, 2001): the use of biofuels (Zailani et al., 2019); engagement in ecotourism (Jamrozy & Lawonk, 2017); technology use

(Mäntymäki & Salo, 2015); social media use (Kaur et al., 2018); food consumption (Choe & Kim, 2018) and the use of mobile financial services (Omigie et al., 2017). Traditionally, functional value attributes, such as quality, price and durability, have been assumed to impact consumer choice most (Sheth et al., 1991; Williams & Soutar, 2009). Studies using the theory of consumption values have shown that the importance of value dimensions varies across contexts. When choosing biofuel, for example, the functional, emotional, epistemic and conditional values all drive choice, but the social value dimension does not (Zailani et al., 2019). For social media use, the social and emotional value dimensions best predict intended participation in social media communities (Kaur et al., 2018). Engaging in adventure tourism is driven by emotional and epistemic value dimensions, as well as value for money (Williams & Soutar, 2009).

Little is known about the value dimensions driving health-related consumer choices. One exception is smoking behavior in teenagers (Albaum et al., 2002), which is best predicted by functional value (perceived smoking benefits, such as relieving stress, stopping nervousness and being relaxed), and social value (negative social perceptions of smokers). The epistemic value dimension also discriminated between smokers and nonsmokers, particularly in relation to the perception that smoking is easy to quit. Other studies have considered consumption values in people's choice of health services, for example, breast screening (Zainuddin et al., 2013). However, they only considered two types of consumption values (functional and social), rather than all five postulated by the theory.

Hitherto, the theory of consumption values has not been used as a framework to examine consumer choice for disability services. Despite the fact that some consumers of disability services may make choices about services that they would prefer not to need, the reality is that in many cases the services are necessary and therefore making a choice about service delivery is also necessary. In the decision making process associated with such a choice, it is likely that consumers of disability services go through the same process of considering the types of value they desire and aligning their choice with the service offering (of those available) that they feel is most likely to delivery this type of value. For this reason, the theory of consumption values is considered a useful theoretical lens through which choice processes related to disability services can be examined.

Materials and methods

Study context

Australia has implemented a national support scheme for people with disabilities, known as the National Disability Insurance Scheme (NDIS). Under

the NDIS, people with disabilities receive personal funding packages and choose how to spend their entitlement. Recipients are no longer "clients"; they are "consumers" with product and brand options. Increased autonomy is designed to give people with disabilities a sense of independence, dignity and respect (Australian Medical Association Victoria, 2014).

Under the NDIS, people with disabilities and/or their carers participate in a planning meeting with an approved coordinator or planner. In this meeting they discuss their personal goals and what they would like to achieve, as well as any specific activities or tasks they would like to undertake. The coordinator or planner then develops a plan based on the individual's needs and goals, and submits the plan for approval to the National Disability Insurance Agency. Once approval is granted, the individual with a disability and/or their carer is able to choose which supports and services they feel would enable them to achieve their goals, which agency will provide them, and when they will be provided. Service providers can then be approached by the consumer and, provided the service provider has capacity, can commence service delivery.

The NDIS allows commercial service providers, putting nonprofit service providers under substantial pressure (Hurley & Ruehl, 2013). "The way in which [disability] service providers differentiate themselves will become more apparent as the role of marketing, a discipline previously not utilized by the sector, will come to the forefront" (Hurley & Ruehl, 2013, p. 1). More sophisticated marketing studies are required to provide insights into the mindsets of consumers such that their needs can be met more effectively.

Data collection

With 18% of people in Australia having a disability (Australian Bureau of Statistics, 2018), using a large online panel was a feasible data collection approach. Panel members completed a 20-minute survey and received a small compensation payment. The approach was approved by the university's Human Research Ethics Committee (approval 16/338).

To develop items for the theory of consumption values questionnaire, we interviewed 15 consumers and 18 providers of disability services, recruited via snowball sampling with two local social service organizations as starting point. Study participants described the disability services they choose and why they choose them. Managers described the disability services they provide, why they provide them, and what value they offered to people with disabilities. Two researchers extracted the key value types and formulated survey items, which were pre-tested with people with disabilities and their carers, and revised as required.

The final survey question asks: "How important is it that disability services do each of the following?" Respondents assessed 26 statements relating to the five theoretical value dimensions using five answer options: (1) not at all

important, (2) slightly important, (3) moderately important, (4) quite important, (5) extremely important.

Seven statements measured functional value: make your life easier; give you more independence; are reliable; are organized; are easy to access, provide you with useful and correct information, provide staff who are friendly and kind. Five statements measured social value: help you socialize with others; increase your contact with friends and family; help you feel more accepted by others; help you participate in community activities; help you live an ordinary life. Five statements measured emotional value: add relaxation to your life; help you feel valued; help make your life more enjoyable; allow your mind to be free and at ease; allow you to feel comfortable with yourself in daily life. Five statements measured epistemic value: help you do new things that you've never been able to try before; provide you with opportunities that add excitement to your lifestyle; help you learn about new things; provide you with unique ways to meet your daily needs; provide you with interesting ways to improve your lifestyle. Four statements measured conditional value: respond to emergency or unexpected situations; consider your geographical location and ability to access services; charge you for services according to your financial situation; offer you a different range of services when your needs change over time.

Respondents also indicated the type and severity of their disability, the types of assistance they needed and overall satisfaction with their disability services. Participants reported their satisfaction with the amount of government funding they received, and with the range of disability services available. We also asked about perceived quality of life, stress levels, social support, internet use and basic sociodemographics.

The survey sample consisted of "consumers" of disability services: people who make purchase decisions about disability services for themselves or for someone they care for. Participants were 18 years or older, resided in Australia, and were heterogeneous in terms of sex, age and state of residence. After data cleaning, 1809 of 2000 responses were usable. Of these, 70% of participants reported making purchase decisions about disability services for themselves, and 30% reported making decisions about disability services on behalf of someone they care for.

Data analysis

We ran an aggregate (assuming that all consumers have the same preferences) and a disaggregate analysis (accounting for heterogeneity in preferences) using data-driven (Dolnicar, 2004) market segmentation. The 26 benefit statements served as segmentation variables. Because of the methodological challenges of clustering with ordinal data (Dolnicar et al., 2018) we binarized responses before conducing cluster analysis.

Before extracting segments, we conducted data structure analysis (Dolnicar & Leisch, 2010) to ensure segment stability: we calculated the k-means algorithm on bootstrap samples for 2–20 segments 100 times (Figure 1). We determined congruence using the Rand index adjusted for chance (Hubert & Arabie, 1985). The adjusted Rand index ranges from −1 to 1, with zero indicating agreement by chance, and 1 indicating stable segmentation solutions.

Solutions with between four and seven segments displayed relatively high stability and differentiated profiles. The two-segment solution differentiated between high and low importance patterns only, and the 3-segment solution contained a high, a low and an "everything else" segment, offering little valuable insights into consumer heterogeneity. Upon closer segment profile inspection, the seven-segment solution emerged as most managerially useful. We created profile plots to identify key segment characteristics, then tested for segment differences in additional personal characteristics using Chi-square tests for nominal and ordinal variables and analysis of variance (ANOVA) for metric variables.

Results

The relative importance of value types for disability services

Figure 2 shows the percentage of study participants perceiving each benefit as more important than their average evaluation (using equidistant scores). Benefits are color coded by value dimension: purple = functional value, orange = social value, blue = emotional value, red = conditional value, and green = epistemic value. Overall, 17 benefits are more important than the average to more than half of respondents. Reliability, accuracy of information, friendly and kind staff, ease of access, and well organized services emerge as most important. More than three

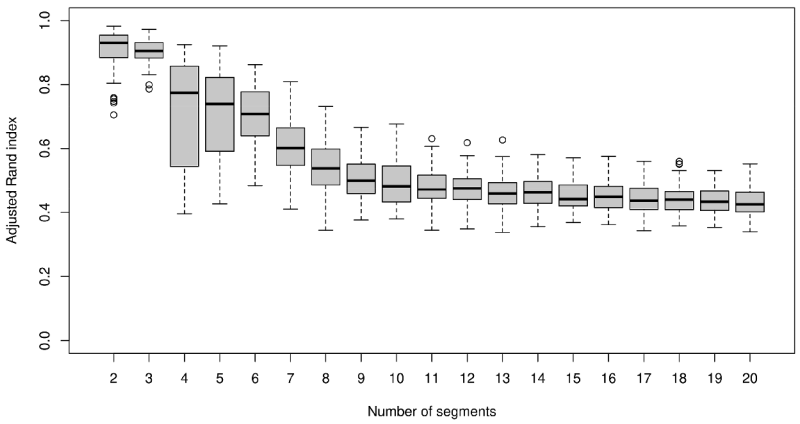

Figure 1. Boxplot of stability of segmentation solutions (2–20 segments).

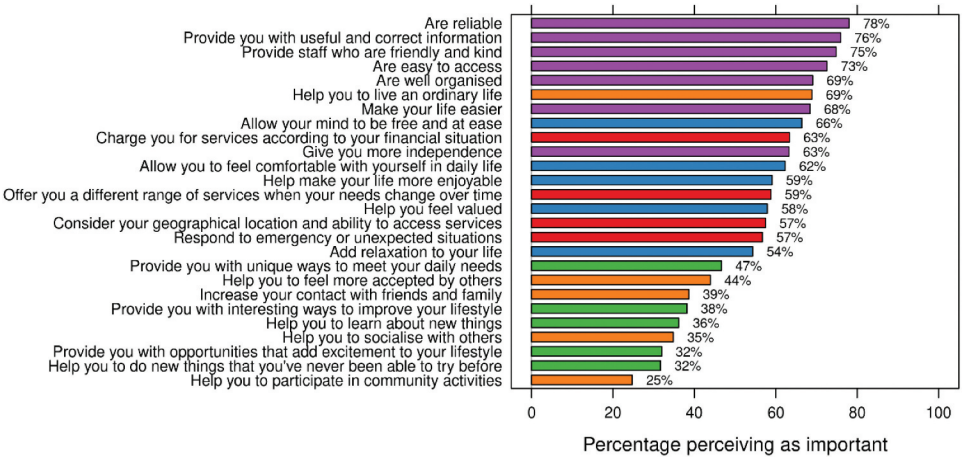

Figure 2. Benefits sought from disability services (total population).

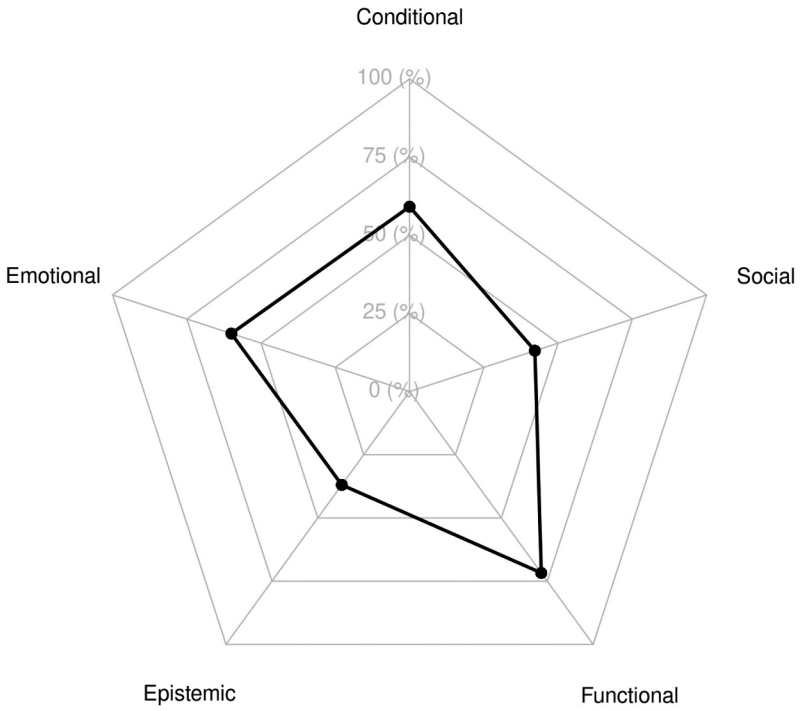

Figure 3. The importance of value dimensions for disability services.

thirds want the services provided to help them lead an ordinary life, and to make their life easier. Increased independence, affordability of services, allowing clients to have a mind that is free and at ease and feel comfortable with themselves in their daily life is important to more than 60% of participants.

The least important benefit is help with participation in community activities, followed by help with doing things they have not tried before, providing

opportunities that add excitement to their lives, enabling them to socialize with others and learning new things, providing interesting ways to improve their lifestyle, increasing contact with family and friends, and enabling them to feel more accepted by others.

Figure 3 shows that, at the aggregate level, functional value emerges as most important (72% importance rating), followed by emotional value (60%), conditional value (59%), and social value (42%). Epistemic value was seen as least important (37%).

Inter-individual differences in the relative importance of value types for disability services

Figure 4 shows segment profile plots (Dolnicar & Leisch, 2013). Benefits are listed in the same order as in Figure 2. Again, benefits are color coded by value dimension: purple = functional value, orange = social value, blue = emotional value, red = conditional value, and green = epistemic value. Red horizontal lines and dots represent population importance, and the bars represent segment importance values. Bars are shaded with the relevant color if a segment characteristic differs less than 25 percentage points or relatively by 50% from the population average. Segment 2 (rating all benefits higher than average) and segment 6 (rating all benefits lower than average) are likely to represent response styles, and are therefore not helpful in designing customized disability services.

A detailed breakdown of the significant differences found between segments are included as Table 1 (nominal and ordinal variables) and Table 2 (metric variables). Segment 1 (*freedom seekers*, 21% of study participants) have four distinct characteristics: it is very important to them that disability services help them enjoy life and feel at ease (emotional values). Socializing with others and participating in community activities – both representing social value dimensions – are significantly less important to segment 1 than they are for the entire population of study participants.

Sixty-seven percent of the *freedom seekers* segment make decisions about disability services for themselves, while 33% make decisions for someone they care for. If they are carers, they are more likely to be caring for their spouse (41%) or parent (35%). *Freedom seekers* have a distinct socio demographic profile: they are older (43% over 60), most likely to be retired (36%), and the majority have a physical disability (70%). The majority of this group (56%) reporting having or caring for someone with a severe disability, and they rely heavily on assistance with daily life (45%), assistive technology (32%) and home modifications (42%). They are least likely to have autism (4%) or an intellectual disability (6%), and to require assistance with finding or keeping a job (10%) or improving their learning (7%). *Freedom seekers* are the group most likely to be dissatisfied with the amount of funding they receive for

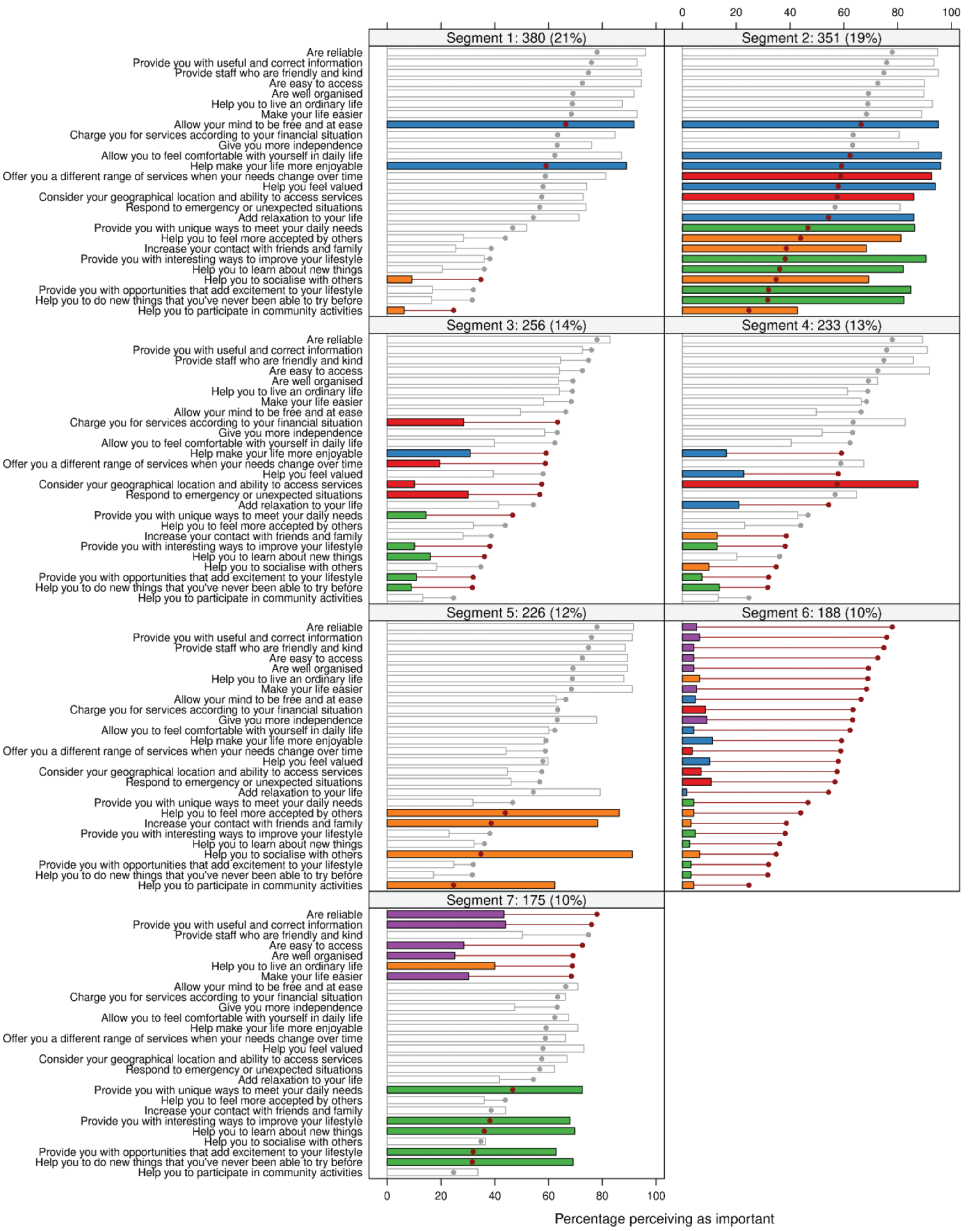

Figure 4. Segment profile plot by benefits sought from disability services.

disability services (21%), and with the range of disability services they receive (22%). This group is the most polarized in terms of overall satisfaction with their disability services: 15% are very satisfied, and 20% very dissatisfied. Their perceived quality of life and happiness are relatively low.

Segment 3 (*low expectation clients*, 14%) is best characterized by the benefits that are not important to them: service affordability, making their life more enjoyable, that service provisions change as service needs change, that services

Table 1. Segment profile characteristics, nominal and ordinal variables.

	% of segment						
Characteristic	Freedom seekers	Low expectation	Isolated clients	Socializers	Excitement seekers	Total	*p*-value (Chi-square)
Age							< 0.001
18–30	7.1	10.9	6.9	9.3	20.6	10.1	
31–40	12.4	17.6	14.6	20.8	19.4	16.3	
41–50	14.7	20.3	18.9	27.0	29.7	20.9	
51–60	22.6	24.2	24.9	23.9	13.1	22.3	
61–70	29.2	17.6	22.3	14.2	13.7	20.8	
71+	13.9	9.4	12.4	4.9	3.4	9.7	
Decisions made for							< 0.001
Self	66.8	69.9	83.3	59.3	73.1	70.0	
Other	33.2	30.1	16.7	40.7	26.9	30.0	
Relationship							< 0.001
Child	11.9	40.3	33.3	42.4	38.3	30.4	
Spouse	40.5	28.6	35.9	12.0	21.3	28.3	
Sibling	4.8	6.5	0.0	10.9	6.4	6.3	
Parent	34.9	18.2	23.1	21.7	21.3	25.5	
Friend	3.2	5.2	2.6	7.6	6.4	5.0	
Other	4.8	1.3	5.1	5.4	6.4	4.5	
School type							< 0.001
Mainstream	95.4	93.2	96.1	91.8	81.9	92.7	
Mainstream (special classes)	0.9	2.3	1.9	2.6	11.6	3.0	
Specialized school	1.8	3.2	1.0	1.5	2.9	2.0	
Prefer not to say	1.8	1.4	1.0	4.1	3.6	2.2	
Employment status							< 0.001
Working full-time	11.8	19.9	8.6	19.9	38.9	18.0	
Working part-time/casually	14.5	14.5	18.0	19.0	18.3	16.5	
Unemployed	3.7	7.0	7.3	6.2	8.6	6.1	
Homemaker	7.1	7.4	6.9	13.3	10.3	8.7	
Retired	36.1	27.3	30.9	19.5	13.7	27.3	
Full-time student	2.9	3.1	2.1	3.5	3.4	3.0	
Full-time carer	7.6	2.7	2.6	4.0	2.3	4.3	
Other	16.3	18.0	23.6	14.6	4.6	16.1	
Area of residence							0.001
Metropolitan	50.0	62.9	49.4	57.1	63.4	55.6	
Regional	35.5	26.6	31.3	27.0	29.7	30.6	

(*Continued*)

Table 1. (Continued).

	% of segment						
Rural	14.5	10.5	19.3	15.9	6.9	13.8	
Stress							0.001
High	44.2	47.7	42.1	52.7	50.3	46.9	
Medium	33.7	36.3	29.2	35.8	32.6	33.6	
Low	22.1	16.0	28.8	11.5	17.1	19.5	
Disability type							
Autism	3.7	10.9	6.0	14.2	16.6	9.2	< 0.001
Intellectual	6.3	12.1	10.7	16.4	14.3	11.2	0.002
Acquired brain injury	13.4	8.6	14.2	8.4	6.9	10.8	0.028
Physical	70.3	52.7	64.4	46.0	46.3	58.0	< 0.001
Severity of disability							0.023
Profound	17.9	15.2	12.9	15.5	20.0	16.3	
Severe	55.5	46.5	58.8	54.0	42.9	52.3	
Moderate	21.3	33.2	23.6	23.9	29.7	25.7	
Mild	5.3	5.1	4.7	6.6	7.4	5.7	
Types of assistance needed							
Assistance with daily life	44.5	32.8	31.3	36.3	29.7	36.2	0.001
Transport	25.0	18.8	19.7	27.4	33.1	24.3	0.004
Access to social/community participation	13.2	16.0	11.6	25.7	22.9	17.0	< 0.001
Assistive technology	32.1	21.5	23.6	23.5	24.0	25.7	0.018
Home modifications	41.6	27.0	29.2	28.3	25.7	31.8	< 0.001
Living arrangements	12.1	13.3	10.3	16.4	25.7	14.6	< 0.001
Increasing social/community participation	9.5	15.2	9.4	24.8	25.1	15.5	< 0.001
Finding and keeping a job	10.3	18.0	11.2	15.0	23.4	14.6	< 0.001
Improving relationships	12.1	17.2	9.0	23.5	27.4	16.7	< 0.001
Improve learning	6.8	13.3	6.9	11.5	21.7	11.0	< 0.001
Improve life skills	10.5	17.2	8.6	25.2	26.9	16.4	< 0.001
Overall satisfaction with disability services							0.014
Very satisfied	15.0	12.9	9.9	13.7	12.6	13.1	
Satisfied	22.9	26.2	23.2	30.1	30.3	25.9	
Neither satisfied/dissatisfied	25.8	32.8	31.8	24.3	32.0	28.9	
Dissatisfied	16.1	15.6	16.7	21.2	13.1	16.6	
Very dissatisfied	20.3	12.5	18.5	10.6	12.0	15.5	
Satisfaction with amount of funding for disability services							0.012
Very satisfied	9.7	8.6	7.3	10.2	7.4	8.8	
Satisfied	18.9	21.5	16.3	20.4	25.1	20.1	

(*Continued*)

Table 1. (Continued).

	% of segment						
Neither satisfied/dissatisfied	34.2	40.2	30.5	33.6	38.3	35.2	
Dissatisfied	16.6	19.1	26.2	21.2	16.6	19.7	
Very dissatisfied	20.5	10.5	19.7	14.6	12.6	16.2	
Satisfaction with range of disability services							0.021
Very satisfied	12.6	9.4	9.4	12.8	8.0	10.8	
Satisfied	21.3	27.0	20.6	25.7	32.0	24.6	
Neither satisfied/dissatisfied	25.5	32.8	27.9	28.8	32.0	28.9	
Dissatisfied	18.7	16.4	21.5	19.0	16.0	18.4	
Very dissatisfied	21.8	14.5	20.6	13.7	12.0	17.3	
Internet use							0.019
Yes, every day	83.4	81.3	84.1	82.7	79.4	82.4	
Yes, but not every day	16.3	17.2	13.7	15.9	15.4	15.8	
No	0.3	1.6	2.1	1.3	5.1	1.7	

Table 2. Segment profile characteristics, metric variables.

Characteristic	Freedom seekers	Low expectation	Isolated clients	Socializers	Excitement seekers	Total	*p*-value (ANOVA)
Quality of life	8.97	9.80	9.19	10.02	10.48	9.57	< 0.001
Happiness	5.71	6.09	5.93	6.19	6.50	6.02	< 0.001
Social support	10.01	10.21	9.57	10.60	10.61	10.16	0.042

offered consider the geographical location of where they are required, that services can change in unexpected situations and are uniquely tailored to their needs, help them learn new things, improve their lifestyle, add excitement to their life and help them try things they have not tried before. These benefits mostly represent conditional and epistemic value dimensions. Seventy per cent of segment 3 (*low expectation clients*) make decisions about their own disability services, while 30% make decisions for someone they care for. *Low expectation clients* are the segment most likely to have or care for someone with a moderate disability (33%) and have attended a specialized school (3%). They are less likely than other segments to require transport assistance (19%) or assistive technology (22%). More members of this segment indicate they are neither satisfied nor dissatisfied with the amount of funding they get (40%), the range of disability services provided to them (33%) and their overall satisfaction with their disability services (33%).

Members of segment 4 (*isolated clients*, 13%) care about one thing primarily: access to services at their geographical location. Perhaps not surprisingly, they are also the group most likely to live in a rural area (19%) with the lowest level of social support (mean 9.6/15). *Isolated clients* are the segment most likely to reporting having or caring for someone with a severe disability (59%; 14% brain injury) but the majority still make care decisions for themselves (83%). Most attended a mainstream school (96%) and use the internet everyday (84%), but only 9% work full time. Of this group, 46% are (very) dissatisfied with their level of funding, and 42% with the range of disability services.

Segment 5 (*socializers*, 12%) views four benefits as substantially more important than the study population: feeling more accepted by others, increasing contact with family and friends, assistance with socializing with others, and help with participation in community activities. All these benefits fall into the social value dimension. *Socializers* are typically 41–60 years old (51%), and either work part time or casually (19%), are homemakers (13%) or are full time students (4%). They are most likely to be making decisions for someone else (41%; most likely their child, sibling, or friend) and are highly stressed (53%). Over half of *socializers* report having or caring for someone with a severe disability (54%), and the nature of the disability is more likely to be intellectual (16%). Typical *socializers* do not require assistance with: accessing social and

community participation (12%), improving living arrangements (10%), increasing social participation (9%), and improving relationships (9%) or life skills (9%). Twenty-one percent are dissatisfied with disability service provision, 10% are very satisfied with the amount of funding, and 13% with the range of services.

Segment 7 (*excitement seekers*, 10%) express low importance for the basic service provider features. Instead, they want their unique needs to be catered for, including finding interesting ways to improve their lifestyle, helping them learn new things, providing opportunities to add excitement to their lifestyle and making it possible for them to try new things. All these benefits represent the epistemic value dimension. Seventy-three per cent of excitement seekers make decisions about disability services for themselves, while 27% make decisions for someone they care for. In terms of severity of the disability, *excitement seekers* are the most polarized, with this segment being most likely to report having very high (profound) levels of disability (20%) or very low (mild) levels of disability (7%). They also report a high level (30%) of satisfaction with their disability services, the funding amount (33%), and the range of services (40%) they receive. It is possible that those with a mild disability have modest requirements, which are met; and those with profound disabilities have such significant needs that disability services make maximum provisions. Indeed, *excitement seekers* have higher support needs than others: they are most likely to require transport assistance (33%), help with improving living arrangements (26%), assistance with increasing social and community participation (25%), assistance with finding and keeping a job (23%), the improvement of relationships (27%), learning (22%), and improving life skills (27%). Interestingly, this segment reports the highest quality of life (10.5), high levels of happiness (6.5) and high levels of social support (10.6). *Excitement seekers* are relatively young (40% under 40), more likely to have attended specialized classes in a mainstream school (12%), and to be working full time (39%) or be unemployed but looking for work (9%). They are not heavy internet users.

Figure 5 shows segment preferences at the level of consumption values. As can be seen, *freedom seekers* place high importance on functional, conditional and emotional value, but little importance on epistemic and social value. *Low expectation clients* care about the functional and emotional value of disability services. *Isolated clients* place the highest importance on functional and conditional value. *Socializers* prioritize social, emotional and functional value. *Excitement seekers* are most concerned about epistemic value and also place high importance on conditional value.

Discussion

At the aggregate level, consumers of disability services gain the most value from the basics of service provision that represent functional value, suggesting

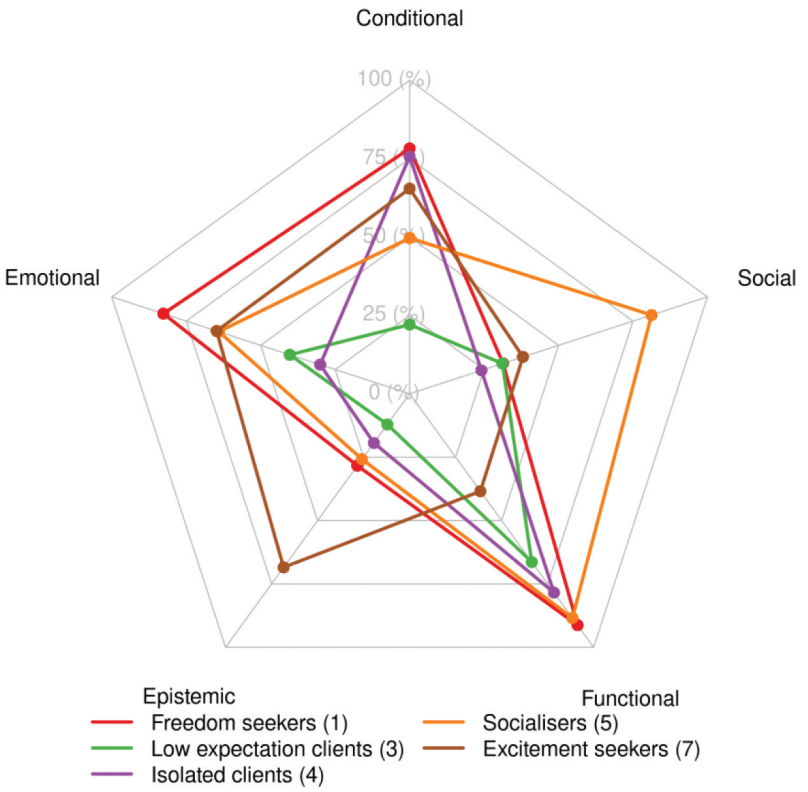

Figure 5. Segment-specific importance of value types for disability services.

that people with disabilities value services that are reliable, organized, easy to access and that provide them with accurate information. High quality staff suitable to deliver the services are also a key functional value benefit. The least appreciated disability service benefits include those that represent epistemic value, such as having new experiences.

Accounting for heterogeneity leads to very different conclusions. Different market segments of people with a disability place importance on different benefit combinations, allowing disability service providers to customize their offerings to better suit the needs of each segment. For example, if service providers wish to target *excitement seekers*, they should develop services delivering epistemic value. This could include, for example, enabling them to try new sports, visit entertainment venues, participate in one-off cultural events or travel to new destinations. Routine or mundane everyday activities are unlikely to meet the needs of this group. This segment is relatively young, suggesting services should consider the popular culture of younger people and activities most suitable for them. Because this group is not very active on the internet, other forms of communication are essential, including advertising on radio or television during shows popular with younger people.

The theoretical contribution of this study lies in the identification of systematic heterogeneity within the market of disability consumers in terms of the types of value they are seeking from their disability services and the benefits they perceive as important. At a practical level, this study illustrates to disability service providers the importance of customizing their services to meet the needs of specific segments. Better meeting the needs of people with disabilities leads to more effective and efficient use of the government funding, and greater wellbeing and quality of life for people with disabilities.

Like Australia, many countries are moving toward social welfare systems that give recipients more control over how they spend their entitlements, opening the market up to commercial providers. To compete effectively, providers must shift to a more customer-oriented approach to delivering greater value. By applying marketing techniques – such as market segmentation – to the increasingly competitive marketplace of social service delivery, providers can better understand consumer needs and tailor their offerings to match those needs.

A limitation of the present study is that we did not force participants to make trade-offs between benefits. Future studies could employ such a design to mimic more closely the decision process encountered in real world choice scenarios. Future studies could also utilize different segmentation bases to further understand consumers of disability services. This could include, for example, *a priori* segmentation studies using the decision maker (i.e. whether this is the person who has a disability or their carer) or the nature of the disability (ranging from mild to severe) as the segmentation variable.

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References

Albaum, G., Baker, K. G., Hozier G. C.Jr, & Rogers, R. D. 2002). Smoking behavior, information sources, and consumption values of teenagers: Implications for public policy and other intervention failures. *Journal of Consumer Affairs*, *36*(1), 50–76. https://doi.org/10.1111/j.1745-6606.2002.tb00420.x

Australian Bureau of Statistics. (2018). *Disability, ageing and carers, Australia: Summary of findings, 2015*. Retrieved June 19, from https://www.abs.gov.au/ausstats/abs@.nsf/mf/4430.0

Australian Medical Association Victoria. (2014). *The national disability insurance scheme explained*. Retrieved May 12, 2019, from https://amavic.com.au/page/Member_Services/Publications__Communications/vicdoc/vicdoc_Features/The_National_Disability_Insurance_Scheme_explained/

Choe, J. Y. J., & Kim, S. S. (2018). Effects of tourists' local food consumption value on attitude, food destination image, and behavioral intention. *International Journal of Hospitality Management*, *71*(1), 1–10. https://doi.org/10.1016/j.ijhm.2017.11.007

Dolnicar, S. (2004). Beyond "commonsense segmentation" - A systematics of segmentation approaches in tourism. *Journal of Travel Research*, *42*(3), 244–250. https://doi.org/10.1177/0047287503258830

Dolnicar, S., Grün, B., & Leisch, F. (2018). *Market segmentation analysis: Understanding it, doing it, and making it useful*. Springer.

Dolnicar, S., & Leisch, F. (2010). Evaluation of structure and reproducibility of cluster solutions using the bootstrap. *Marketing Letters*, *21*(1), 83–101. https://doi.org/10.1007/s11002-009-9083-4

Dolnicar, S., & Leisch, F. (2013). Using graphical statistics to better understand market segmentation solutions. *International Journal of Market Research*, *56*(2), 97–120. https://doi.org/10.2501/IJMR-2013-073

Dolnicar, S., & Randle, M. (2007). What moves which volunteers? Psychographic heterogeneity among volunteers in Australia. *Voluntas: International Journal of Voluntary and Nonprofit Organizations*, *18*(2), 135–155. https://doi.org/10.1007/s11266-007-9037-5

Hubert, L., & Arabie, P. (1985). Comparing partitions. *Journal of Classification*, *2*(1), 193–218. https://doi.org/10.1007/BF01908075

Hurley, B., & Ruehl, M. (2013). *Disability services enter the market with NDIS*. BRW. Retrieved October 12, from http://www.brw.com.au/p/brw-lounge/disability_services_enter_the_market_GZWZMYEJo8PJZfq6aTpL5J

Jamrozy, U., & Lawonk, K. (2017). The multiple dimensions of consumption values in ecotourism. *International Journal of Culture, Tourism and Hospitality Research*, *11*(1), 18–34. https://doi.org/10.1108/IJCTHR-09-2015-0114

Kaur, P., Dhir, A., Rajala, R., & Dwivedi, Y. (2018). Why people use online social media brand communities: A consumption value theory perspective. *Online Information Review*, *42*(2), 205–221. https://doi.org/10.1108/OIR-12-2015-0383

Mäntymäki, M., & Salo, J. (2015). Why do teens spend real money in virtual worlds? A consumption values and developmental psychology perspective on virtual consumption. *International Journal of Information Management*, *35*(1), 124–134. https://doi.org/10.1016/j.ijinfomgt.2014.10.004

National Disability Insurance Agency. (2021). *NDIS price guide 2020–21*. Retrieved March 20, from https://www.ndis.gov.au/providers/price-guides-and-pricing

Omigie, N. O., Zo, H., Rho, J. J., & Ciganek, A. P. (2017). Customer pre-adoption choice behavior for M-PESA mobile financial services: Extending the theory of consumption values. *Industrial Management & Data Systems*, *117*(5), 910–926. https://doi.org/10.1108/IMDS-06-2016-0228

Randle, M., Miller, L., Dolnicar, S., & Ciarrochi, J. (2012). Heterogeneity among potential foster carers: An investigation of reasons for not foster caring. *Australian Social Work*, *65*(3), 382–397. https://doi.org/10.1080/0312407X.2011.574229

Randle, M., Miller, L., Dolnicar, S., & Ciarrochi, J. (2014). The science of attracting foster carers. *Child and Family Social Work*, *19*(1), 65–75. https://doi.org/10.1111/j.1365-2206.2012.00881.x

Sheth, J. N., Newman, B. I., & Gross, B. L. (1991). Why we buy what we buy: A theory of consumption values. *Journal of Business Research*, *22*(2), 159–170. https://doi.org/10.1016/0148-2963(91)90050-8

Sweeney, J. C., & Soutar, G. N. (2001). Consmer percieved value: The development of a multiple item scale. *Journal of Business Research*, *77*(2), 203–220. https://doi.org/10.1016/S0022-4359(01)00041-0

Williams, P., & Soutar, G. N. (2009). Value, satisfaction and behavioral intentions in an adventure tourism context. *Annals of Tourism Research*, *36*(3), 413–438. https://doi.org/10.1016/j.annals.2009.02.002

World Bank. (2019). *Disability inclusion*. Retrieved August 8, from https://www.worldbank.org/en/topic/disability

Zailani, S., Iranmanesh, M., Hyun, S. S., & Ali, M. H. (2019). Applying the theory of consumption values to explain drivers' willingness to pay for biofuels. *Sustainability*, *11*(3), 668. https://doi.org/10.3390/su11030668

Zainuddin, N., Russell-Bennett, R., & Previte, J. (2013). The value of health and wellbeing: An empirical model of value creation in social marketing. *European Journal of Marketing*, *47*(9), 1504–1524. https://doi.org/10.1108/EJM-10-2011-0564